UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,166	08/19/2003	Jin-han Kim	1293.1867	3597

49455 7590 04/19/2007

STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER	
NGUYEN, LINH THI	
ART UNIT	PAPER NUMBER
2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/643,166	KIM ET AL.	
	Examiner	Art Unit	
	Linh T. Nguyen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) *33-42 and 59-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32 and 43-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12, 17-28, and 43-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondo et al (US Publication number 20020110067).

In regards to claims 1, 17, 43 and 51, Kondo et al discloses a method, apparatus, and computer program to modulate address data of a disc type recording medium (Paragraph [0161]), the method comprising: generating the address data (Figs. 9-12); performing error correction coding of the address data and outputting coded address data (Paragraph [0164], the data are accompany by ECC); receiving the coded address data in a unit of at least two bits (Figs. 9-12); generating a first modulated signal of the coded address data using a first modulation technique; generating a second modulated signal of the coded address data using a second modulating signal; and generating a unit wobble signal by synthesizing the first and second modulated signals (Paragraph [0187]; state that frequency and phase modulation can be use at the same time).

In regards to claims 2, 8, 44 and 52, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises generating a signal using the first modulation technique indicating each bit value of the coded

address data (Fig. 9, shows an amplitude modulation of coded address data) and generating the second modulated signal using the second modulation technique by generating a signal indicating each bit value of the coded address data (Fig. 10, shows a frequency modulation of the coded address data).

In regards to claims 3, 19, 45, and 53, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises, using the first modulation technique, generating a predetermined pattern signal if a bit value of the coded address data is equal to a first bit value and not generating the predetermined pattern signal if the bit value of the coded address data is equal to a second bit value (Paragraph [0167]), and generating the second modulated signal using the second modulation technique by generating the signal indicating each bit value of the coded address data (Figs. 9-12).

In regards to claims 4, 20, 46 and 54, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises generating a signal using the first modulation technique to distinguish signals indicating each bit value from one another (Figs. 9-12), and generating the second modulated signal using the second modulation technique by generating signals having different lengths for each at least two-bit values of coded address data (Fig. 13 and Paragraph [0194]).

In regards to claims 5, 21, 47 and 55, Kondo et al discloses the method and

apparatus, wherein the generation of the first modulated signal comprises generating at least two pattern signals indicating at least two-bit values of the coded address data using the first modulation technique (Fig. 9 and Paragraph [00167]), and generating the second modulated signal using the first modulation technique by generating at least two signals used to distinguish signals indicating a bit value of the address data using the second modulation technique (Fig. 10 and Paragraph [0171]), where the coded address data of at least two bits is indicated by disposing at least two pattern signals in predetermined locations and inserting at least two signals to distinguish signals indicating a bit value of the address data between the at least two pattern signals (Paragraphs [0167] and [0171]).

In regards to claims 6, 22, 48 and 56, Kondo et al discloses the method and apparatus, wherein the generation of the unit wobble signal comprises disposing the first and second modulated signals adjacent to each other (Paragraph [0187], if able to use different modulation at the same time and synthesizing it, then it is inherent that the first and second modulated signals adjacent to each other).

In regards to claims 7, 23, 49 and 57, Kondo et al discloses the method and apparatus, wherein the generation of the unit wobble signal comprises alternating the first and second modulated signals (Paragraph [0187]).

In regards to claims 8, 24, 50 and 58, Kondo et al discloses the method and

apparatus, further comprising: generating signals indicating each bit of the coded address data (Figs. 9-12).

In regards to claims 9-12 and 25-28, Kondo et al discloses the method, further comprising: generating a signal indicating a start of the coded address data using one of the first and second modulation techniques and a third modulation technique (Fig. 12, shows Phase modulation).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13-16 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al '067 in view of Kondo et al '934 (US Publication number 20050099934).

In regards to claims 13-16 and 29-32, Kondo et al'067 does not but Kondo et al '934 discloses the method and apparatus, wherein the first modulation technique is binary phase shift keying (BPSK) and the second modulation technique is frequency shift keying (FSK) (Paragraph [0135]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method of modulation of Kondo et al '067 to have a modulation technique of FSK and BPSK as suggested by

Kondo et al '934. The motivation would have been to be able to control the speed of the motor, which rotate the disk.

Response to Arguments

Applicant's arguments, see page 14, filed 01/19/07, with respect to the rejection(s) of claim(s) 1 under Heemsherk et al and Kobayashi have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kondo et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN
April 12, 2007

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER